

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: BARONE, Steven Examiner: Barton, Jeffrey T.
Serial No.: 10/791,426 Group: Art Unit 1795
Filed: March 2, 2004 Docket: 1035-2 PCT US CIP
For: **SELF TRACKING,
WIDE ANGLE SOLAR
CONCENTRATORS** Dated: June 10, 2008
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Commissioner for Patents
P.O. Box 1450
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RESPONSE "B"

Sitz:

In response to the Office Action dated April 10, 2008, please consider the following remarks:

Listing of Claims: A listing of the claims as pending is provided beginning on page 2 of this paper.

Remarks/Arguments begin on page 5 of this paper.

CERTIFICATE OF TRANSMISSION UNDER 37 C.F.R. §1.8(a)

I hereby certify that this correspondence is being transmitted on the date below with the United States Patent and Trademark Office, PO Box 1450, Alexandria, VA 22313-1450, via electronic submission.

Dated: June 10, 2008

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LISTING OF CLAIMS

1. (Currently amended) A solar concentrator system comprising:
 - at least one solar cell that includes photovoltaic material; and
 - at least one optical element for at least partially focusing incident solar radiation onto the photovoltaic material, said optical element having a plurality of lenses superimposed on ~~the a curved~~ surface of a larger lens.
2. (Original) The solar concentrator system according to claim 1 further including a housing having an opening for receiving incident solar radiation, the housing supporting the at least one optical element adjacent the opening and the photovoltaic material.
3. (Original) The solar concentrator system according to claim 1 further including directing means for directing at least partially focused radiation emerging from the at least one optical element generally towards the location of the photovoltaic material.
4. (Original) The solar concentrator system according to claim 3 wherein the directing means includes at least one mirror.
5. (Original) The solar concentrator system according to claim 3 wherein the directing means includes at least one prism.

6. (Original) The solar concentrator system according to claim 1 including a plurality of solar cells.

7. (Original) The solar concentrator system according to claim 1, comprising a plurality of optical elements.

8. (Original) The solar concentrator system according to claim 1, wherein the at least one optical element comprises at least one Fresnel lens.

9. (Currently amended) A solar concentrator comprising:
an array of solar cell elements that each include photovoltaic material; and
an array of optical elements to at least partially focus incident solar radiation onto the photovoltaic material of at least one of the solar cell elements in the array of solar cell elements, each of the optical elements having a plurality of lenses superimposed on the a curved surface of a larger lens.

10. (Original) The solar concentrator system according to claim 9 further including a housing having an opening for receiving incident solar radiation, the housing supporting the array of optical elements adjacent the opening and the array of solar cells.

11. (Original) The solar concentrator system according to claim 9 further including directing means for directing at least partially focused radiation emerging from the array of optical elements generally towards the location of the array of solar cells.

12. (Original) The solar concentrator system according to claim 11 wherein the directing means includes at least one mirror.

13. (Original) The solar concentrator system according to claim 11 wherein the directing means includes at least one prism.

14. (Original) The solar concentrator system according to claim 9, wherein the at least one optical element in the array of optical elements comprises at least one Fresnel lens.

REMARKS/ARGUMENTS

The present application has been reviewed in light of the Office Action mailed April 10, 2008. Claims 1-14 are currently pending in this application. Favorable reconsideration of this application is respectfully requested in view of the following remarks.

Claims 1 and 9 have been amended to recite that a plurality of lenses is superimposed on a curved surface of a larger lens. Support for this amendment can be found at page 7, line 19 through page 8 line 12 of the application as filed and in figure 5. No new matter is added.

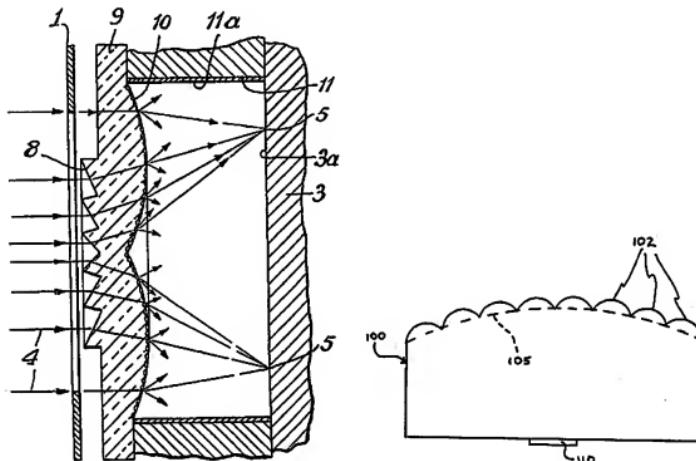
Claims 1-3, and 8 have been finally rejected under 35 U.S.C. §102(b) as being anticipated by Ploke. This rejection is respectfully traversed.

Nowhere does Ploke teach or suggest a plurality of lenses superimposed on the curved surface of a larger lens as recited in claim 1. Rather, regarding FIG. 2 (the figure referred to in the office action), Ploke discloses at column 3, lines 7 – 13:

“The lens 9 is constructed on its face 8, which is directed toward the incoming light rays, in the form of a Fresnel or stepped lens, while the face 10 of lens 9, which is directed away from the incoming light rays, is constructed in the form of an area having an annular cambered portion and the like.”

Ploke’s lens differs from the recited lens in that the different faces of the Ploke lens (face 8 and face 10) are on opposite sides of the same lens (9). In contrast, in the recited optical element, a plurality of lenses is superimposed on a larger lens. Placing two faces on opposite sides of a lens (as in Ploke) is vastly different from the structure of the

optical element recited in claim 1 wherein a plurality of lenses is superimposed on a larger lens. This difference is clear from a comparison of Fig. 2 of Ploke with Fig. 5 of the present application.



Ploke Fig. 2 with faces 8, 10 on
opposite side of lens 9

Presently recited optical element 100
with plurality of lenses 102
superimposed on surface 105 of
larger lens

In view of the foregoing, reconsideration and withdrawal of the rejection of claims 1-3 and 8 as being anticipated by Ploke is deemed appropriate and is respectfully requested.

Claims 4 and 5 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Ploke in view of Nicoletti. This rejection is respectfully traversed.

The deficiencies of Ploke are noted above. Nicoletti does not and is not cited in the Office Action as curing the above-noted deficiencies of Ploke. Rather, Nicoletti is merely cited as disclosing the use of a mirror or prism to direct light. In view of the foregoing, reconsideration and withdrawal of the rejection of claims 4 and 5 as being obvious over Ploke in view of Nicoletti is deemed appropriate and is respectfully requested.

Claims 6, 7, 9-11 and 14 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Ploke in view of Lawheed. This rejection is respectfully traversed.

The deficiencies of Ploke are noted above. Lawheed does not and is not cited in the Office Action as curing the above-noted deficiencies of Ploke. Rather, Lawheed is merely cited as disclosing the use of an array or plurality of optical elements and solar cells coupled together with one housing. In view of the foregoing, reconsideration and withdrawal of the rejection of claims 6, 7, 9-11 and 14 as being obvious over Ploke in view of Lawheed is deemed appropriate and is respectfully requested.

Claims 12 and 13 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Ploke in view of Lawheed and Nicoletti. This rejection is respectfully traversed.

The deficiencies of Ploke are noted above. Lawheed and Nicoletti do not and are not cited in the Office Action as curing the above-noted deficiencies of Ploke. Rather, Lawheed is merely cited as disclosing the use of an array or plurality of optical elements and solar cells coupled together with one housing. Nicoletti is merely cited as disclosing the use of a mirror or prism to direct light. In view of the foregoing, reconsideration and

withdrawal of the rejection of claims 12 and 13 as being obvious over Ploke in view of Lawheed and further in view of Nicoletti is deemed appropriate and is respectfully requested.

Claims 1-14 have been rejected on ground on nonstatutory obvious type double patenting as being unpatentable over claims 1-15 of U.S. Patent No. 6,700,055 to Barone (hereinafter referred to simply as "Barone") in view of Ploke. This rejection is respectfully traversed.

The Office Action admits Barone discloses "all the features of the presently claimed invention except for the optical element having a plurality of lenses superimposed on the surface of a larger lens." Ploke is cited in the Office Action as curing the deficiencies of Barone, however, as noted above Ploke fails to teach superimposing one lens upon another, but rather discloses placing two faces on opposite sides of a lens. In view of the foregoing, reconsideration and withdrawal of the rejection on ground on nonstatutory obvious type double patenting as being unpatentable over claims 1-15 of Barone in view of Ploke is deemed appropriate and is respectfully requested.

In view of the foregoing, this application is believed to be in condition for allowance, such early and favorable action being earnestly solicited.

If the Examiner believes that a telephonic interview will be helpful in advancing prosecution of the present application, he is respectfully invited to call the undersigned at 631-501-5709.

Respectfully submitted,



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